San Roque Canyon Bridge
State Highway 192
Santa Barbara
Santa Barbara County
California

HAER No. CA-17

PHOTOGRAPHS

HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service, Western Region
Department of the Interior
San Francisco, California 94102

HISTORICAL AMERICAN ENGINEERING RECORD

San Roque Canyon Bridge

HAER No. CA-17

Location:	Spanning San Roque Canyon on State Highway 192, Santa Barbara, Santa Barbara County, California.
Date of Construction:	1931
Present Owner:	California Department of Transportation 1120 N Street, Sacramento, California
Present Use:	Demolished
Significance:	San Roque Canyon Bridge is significant because of the commitment to concrete prelevant in California, the plate girder arch, as a type, is relatively rare. There are only two known in the State at this time, and since the other is a through arch span, San Roque Canyon Bridge is the only known one of its type in California.
Report Preparation:	John W. Snyder, CALTRANS Staff Architectural Historian

San Roque Canyon Bridge, Bridge No. 51-104, 05-SB-192, P.M. 1.77 is described as steel stringer approach spans and three hinge steel plate girder arch spans on steel column bent and concrete seat abutments, all on spread footings. Its five spans total 482 feet in length, 28 feet in width, and carry a two-lane, 22-foot roadway and a five-foot sidewalk between steel railings; its two arches span 188 feet each. The bridge was designed in 1931 by Ulysses Sumner Grant, a civil engineer in the Office of Santa Barbara County Surveyor Owen H. O'Neill; the bridge was built in 1931 by contractor C. B. Davison for Santa Barbara County.

Development of this route began in 1930 as an attempt to relieve traffic congestion and provide a foothill route between Santa Barbara and Goleta. Construction on the route began in June 1930 and was completed in April 1932. The first proposal for the bridging of San Roque Canyon called for the salvaging and reuse of the Fourth Street Viaduct, then being replaced in Los Angeles. O'Neill's design for this proposal called for three Pratt truss spans. However, no action was taken by the Supervisors on the bids subsequently submitted, and they eventually ordered O'Neill to prepare new plans. These were prepared by Grant, then in the employ of O'Neill.

Grant, apparently at the direction of O'Neill, prepared five different designs for study, of which the subject bridge was one. Others were: a concrete arch bridge, virtually a copy of the then-12-year old Arroyo Hondo Bridge; a twin-towered suspension bridge whose cables would have supported Warren-trussed deck spans; a trussed-arch suspension bridge which would have crossed the canyon with a single arch; and a design utilizing a pair of two-hinged trussed arch-spans similar in elevation to the selected design. Eventually, the present design was selected; apparently the main factor was cost, estimated at $53,000 for this design and higher for the others.

Construction began in April 1931 and proceeded smoothly during that spring and summer. A labor dispute arose in September when it was revealed that subcontractor Minneapolis Steel and Machinery was employing outside labor in violation of a pledge by the contractor to use local labor. However, the matter was resolved without delay to the steel work, which was completed on October 1, 1931. Work began on the deck and was apparently completed by November 9, since that date was selected for acceptance by the supervisors at their December 7 meeting.

Designer U.S. Grant was born September 9, 1890 in Laramie, Wyoming. His father was a mining and civil engineer, and his mother the county school superintendent and teacher. His education was in the public schools of Laramie, and at the University of Wyoming where he gained a B.S. degree in civil engineering in 1913. He came to California that same year, and was employed by the Celite Company as a topographical engineer for six months. Moving to Los Angeles, he worked first for the Pacific Light and Power Company, and later did surveying work for the Southern Pacific Railroad in Ventura before returning to Santa Barbara and entering employ in the office of the

County Surveyor. He remained in that position until 1932, when he assumed private practice. He had a brief partnership with Francis Evans. His work included Peabody Stadium at Santa Barbara High School, work for Johns-Manville in Lompoc, and runways for military airports in Santa Barbara and San Diego during World War II. In 1946 he was joined by son Mortimer Leslie Grant, who became a full partner in 1949. U. S. Grant died in 1952.

In terms of engineering or technological development, the subject bridge fails to exhibit significance. Plate girder arch bridges date to the turn of the century as a type; Grant's education would have included knowledge of the type. Research in Steel magazine for this period indicates other larger examples were being built and winning annual design awards. Given that concrete was the usual choice for bridges in California after the first years of the 20th Century, the use of steel here probably reflects the effects of the Depression, enabling steel to underbid concrete. (As an aside, even the State resorted to building three-hinged, trussed wooden arch spans during this period of short funds; these were later replaced with concrete bridges as funds became available.) However, these same factors of commitment to concrete and Depression-era contingencies combine to provide other significance for the bridge. Because of the commitment to concrete prevalent in California, the plate girder arch, as a type, is relatively rare. Indeed, there are only two known in the State at this time, and since the other is a through arch span, San Roque Canyon Bridge is the only known one of its type in California.

In applying National Register criteria, this bridge has integrity of location, design, setting, materials, workmanship, feeling and association. It does not appear to be associated with events which have made a significant contribution to the broad patterns of our history (Criterion A); its association with the Depression is peripheral. It does not appear to be associated with the lives of persons significant in our past (Criterion B). It has not yielded, and does not appear likely to yield information important in prehistory or history (Criterion D). It does, however, embody the distinctive characteristics of a type (steel plate girder multiple arch bridge), period (1930s), and method of construction (on-site erection of prefabricated structural members, including field riveting) (Criterion C). It does not appear to be the work of a master (Criterion C); U. S. Grant was a competent, if unimaginative, engineer insofar as bridge design is concerned, but cannot be construed to be a "master". National Register criteria clearly state that properties achieving significance within the past 50 years are not considered eligible, unless they are of exceptional importance. The subject bridge is less than 50 years old, though it is nearing that figure. A borderline case, it is difficult to assess exceptional importance. However, it is conceivable that the relative rarity of the type within this State may be the necessary qualifier. It appears that the San Roque Canyon Bridge may meet National Register Criterion C.

References:

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